

## IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of: Thompson et al.  
Serial No: 10/034,833  
Filed: 27 December 2001  
For: Systems to Promote Dissolution of Thrombi in the Thoracic Cavity

Group Art Unit: 3737  
Examiner: Ruth Smith

Mail Stop RCE  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

**TRANSMITTAL OF INFORMATION DISCLOSURE STATEMENT BEFORE MAILING DATE  
OF EITHER A FINAL ACTION OR NOTICE OF ALLOWANCE (37 CFR 1.97(c))**

NOTE: "An information disclosure statement shall be considered by the Office if filed ... before the mailing date of either (1) a final action under S 1.113 or (2) a notice of allowance under S 1.311, whichever occurs first, provided the statement is accompanied by either a certification as specified in paragraph (e) of this section or the fee set forth in S 1.17(p)." 37 CFR 1.97(c).

NOTE: "If a final action or notice of allowance is mailed in an application and later withdrawn, the application will be considered as not having had a final action or notice of allowance mailed for purposes of considering an information disclosure statement." Notice of April 20, 1992 (1138 O.G. 37-41, 39).

NOTE: "If information submitted during the period set forth in 37 CFR 1.97(c) with a certification is used in a new ground of rejection on unamended claims, the next Office action will not be made final since in this situation it is clear that applicant has submitted the information to the office promptly after it has become known and the information is being submitted prior to a final determination on patentability by the Office. However, the information submitted with a certification can be used in a new ground of rejection and the next Office action made final, [i]f the new ground of rejection was necessitated by amendment of the application by applicant. Where the information is submitted during this period with a fee, the examiner may use the information submitted, e.g., printed publication or evidence of public use, and make the next Office action final whether or not the claims have been amended, provided that no other new ground of rejection which was not necessitated by amendment to the claims is introduced by the examiner. See MPEP 706.07(a). If a new ground of rejection is introduced that is neither necessitated by an amendment to the claims nor based on the information submitted with the fee set forth in 37 CFR 1.17(p), the Office action shall not be made final." Notice of April 20, 1992 (1138 O.G. 37-41, 39).

WARNING: "A PETITION FOR SUSPENSION OF ACTION TO ALLOW APPLICANT TIME TO SUBMIT AN INFORMATION DISCLOSURE STATEMENT WILL BE DENIED AS FAILING TO PRESENT GOOD AND SUFFICIENT REASONS, SINCE 37 CFR 1.97 PROVIDES ADEQUATE RECOURSE FOR THE TIMELY SUBMISSION OF PRIOR ART FOR CONSIDERATION BY THE EXAMINER." NOTICE OF JULY 6, 1992 (1141 O.G. 63).

**TIME OF TRANSMITTAL OF ACCOMPANYING INFORMATION  
DISCLOSURE STATEMENT**

1. The information disclosure statement transmitted herewith is being filed AFTER THREE MONTHS OF THE FILING DATE OF THIS NATIONAL APPLICATION OR THE DATE OF ENTRY OF THE NATIONAL STAGE AS SET FORTH IN S 1.491 IN AN INTERNATIONAL APPLICATION OR AFTER THE MAILING DATE OF THE FIRST OFFICE ACTION ON THE MERITS, WHICHEVER EVENT OCCURRED LAST BUT BEFORE THE MAILING DATE OF EITHER:

- (1) a final action under § 1.113 or
- (2) a notice of allowance under § 1.311,  
whichever occurs first.

**CERTIFICATE OF MAILING (37 CFR 1.8a)**

I hereby certify that this correspondence is being deposited with the United States Postal Service as First Class Mail, with sufficient postage, in an envelope addressed as follows: Mail Stop RCE, Commissioner for Patents, PO Box 1450, Alexandria, VA 22313-1450, on 11 January 2007

Signature of Person Signing

Linda S. Wenzel

Type or Print Name of Person Signing

**CERTIFICATION OR FEE**

2. Accompanying this transmittal is  
(check either A or B below)  
A. ☐ a certification as specified in 37 CFR 1.97(e)  
OR  
B. ☒ the fee set forth in 37 CFR 1.17(p) for submission of an information disclosure statement under S 1.97(c). (\$180.00).

**FEE PAYMENT**

(complete this item, if applicable)

3. Applicant elects the option to pay the fee set forth in 37 CFR 1.17(p) for submission of an information disclosure statement under S 1.97(c) (\$180.00).

Fee due \$ 180.00

**METHOD OF PAYMENT OF FEE**

4. ☒ Attached is check in the amount of \$ 180.00  
☐ Charge Account No.      in the amount of \$                       
A duplicate of this request is attached.


The submission of any document herewith is not intended as an admission that such document constitutes prior art against the claims of the present application or that such document is considered material to patentability as defined in 37 CFR §1.56(b). Applicant does not waive any rights to take any action which would be appropriate to antedate or otherwise remove as a competent reference any document which is determined to be a *prima face* prior art reference against the claims of the present application.

If any additional fees are due, please charge Account No. 06-2360

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\_\_\_\_\_  
Signature of Attorney  
Daniel D. Ryan  
Type or Print Name of Attorney of Record  
**RYAN KROMHOLZ & MANION, S.C.**  
**Post Office Box 26618**  
**Milwaukee, Wisconsin 53226-0618**  
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**LIST OF PRIOR ART CITED BY APPLICANT**  
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ATTY DOCKET NO.  
9345.17121-CON 4

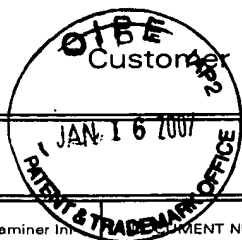
SERIAL NO.  
10/034,833

APPLICANT  
Thompson et al.

FILING DATE  
27 December 2001

GROUP  
3737

Customer No. 26308



**U.S. PATENT DOCUMENTS**

Examiner Initial	DOCUMENT NUMBER	Date	Name	Class	Subclass	Filing Date (If Appropriate)
	4,563,261	01/1986	Staab et al.			
	4,740,287	04/1988	Cawfield			
	3,985,337	10/1976	Gripe et al.			
	5,531,119	07/1996	Meyers			
	6,080,187	06/2000	Alt et al.			
	5,394,047	02/1995	Scharlack et al.			
	6,577,042	06/2003	Lee et al.			

**FOREIGN PATENT DOCUMENTS**

DOCUMENT NUMBER	DATE	COUNTRY	Class	Sub-class	Translation Yes No

**OTHER PRIOR ART (Including Author, Title, Date, Pertinent Pages, Etc.)**

		Internet article: "Good Vibrations Personal Energiser - Vitafon - IR" (Google Web address), discloses information about the Vitafon-IR device (a well known device operable to deliver microvibrations in the audible frequency range which has been on sale well before 2003) and its use in improving blood flow and selectively improving drug concentration and thereby improved drug efficacy localized to the action of devices's transformers.
		Koiwa et al., "The effect of diastolic vibration on the coronary flow rate in the canine heart with ischemia" Journal Cardiovasc Diagn Procedures, 12; p. 110 (1994)
		Zagzebski, "Essentials of Ultrasound Physics," Physics of Diagnostic Ultrasound, p. 5 (1996)
		Google Website: "Hearing Pitch or Sound Frequencies - Succeed Through Using your Senses" - "Hearing Pitch or Sound Frequencies" by Ron Kurtus (7 March 2001)
		Google Website: "Frequency Hearing Ranges in Dogs and Other Species" - "How Well Do Dogs and Other Animals Hear" references data from Fay (1988) and Warfield (1973) in a table which lists the human audible frequency range between 64 - 23 000 Hz, and some animals as high as 150 kHz.

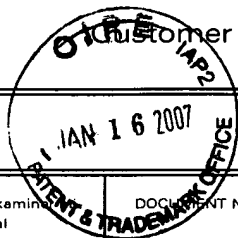
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LIST OF PRIOR ART CITED BY APPLICANT <i>(Use several sheets if necessary)</i>	ATTY DOCKET NO. 9345.17121-CON 4	SERIAL NO. 10/034,833
	APPLICANT Thompson et al.	
	FILING DATE 27 December 2001	GROUP 3737

Customer No. 26308



### U.S. PATENT DOCUMENTS

Examination Status	DOCUMENT NUMBER	Date	Name	Class	Subclass	Filing Date (If Appropriate)
	5,313,935	05/1994	Kortenbach et al.			
	5,359,993	11/1994	Slater et al.			
	5,400,267	03/1995	Denen et al.			
	6,295,330	09/2001	Skog et al.			
	7,048,687	05/2006	Reuss et al.			
	6,979,812	12/2005	Al-Ali			
	6,237,604	05/2001	Burnside et al.			
	5,991,355	11/1999	Dahlke			

### FOREIGN PATENT DOCUMENTS

	DOCUMENT NUMBER	DATE	COUNTRY	Class	Sub-class	Translation Yes No

### OTHER PRIOR ART *(Including Author, Title, Date, Pertinent Pages, Etc.)*


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U.S. PATENT DOCUMENTS

Document Initial	DOCUMENT NUMBER	Date	Name	Class	Subclass	Filing Date (If Appropriate)
	5,291,894	03/1994	Nagy			
	5,695,460	12/1997	Siegel et al.			
	5,725,482	03/1998	Bishop			
	2003/0157025	08/2003	Unger et al.			
	5,580,575	12/1996	Unger et al.			
	6,477,426	11/2002	Fenn et al.			
	6,682,502	01/2004	Bond et al.			

FOREIGN PATENT DOCUMENTS

DOCUMENT NUMBER	DATE	COUNTRY	Class	Subclass	Translation Yes No
JP8089549	04/1996	JP			
WO 85/03634	08/1985	PCT			

OTHER PRIOR ART (Including Author, Title, Date, Pertinent Pages, Etc.)

		Koiwa et al., "The effect of diastolic vibration on the coronary flow rate in the canine heart with ischemia" Journal Cardiovasc Diagn Procedures, 12; p. 110
		Lindblad et al., "Effect of Vibration on a Canine Cutaneous Artery," Am J. Physiol. 250 H519-H523 (1986)
		Ljung et al., "Inhibition of Vascular Smooth Muscle Contraction by Vibrations" Abstract Acta Physiol. Scand., 396, Suppl., p. 95 (1973)
		The "Vita fon Device," Vita fon Company, <a href="http://www.vita fon.net">www.vita fon.net</a>
		Zagzebski, "Essentials of Ultrasound Physics," Physics of Diagnostic Ultrasound, p. 5

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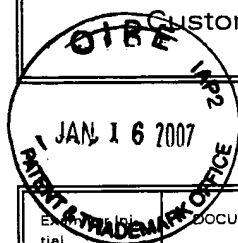
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### U.S. PATENT DOCUMENTS

Ex- am- ple	DOCUMENT NUMBER	Date	Name	Class	Subclass	Filing Date (If Appropriate)
	5,720,304	02/1998	Omura			
	5,190,766	03/1993	Ishihara			
	2003/0204141	04/2002	Nock et al.			

### FOREIGN PATENT DOCUMENTS

	DOCUMENT NUMBER	DATE	COUNTRY	Class	Sub- class	Translation Yes No

### OTHER PRIOR ART (Including Author, Title, Date, Pertinent Pages, Etc.)

			Ng, K. et al., "Therapeutic Ultrasound: Its Application in Drug Delivery"; Medicinal Research Reviews, Vol. 22, No. 2, 204-223, 2002
			Tachibana, K. et al., "The Use of Ultrasound for Drug Delivery"; Echocardiography, Vol. 18, May 2001.
			Hull, W. et al., "Heat-Enhanced Transdermal Drug Delivery: A Survey Paper"; The Journal of Applied Research, Vol. 2, No. 1, Winter 2002.
			International Cancer Research Portfolio ABSTRACT - award funding period 01-15-99 to 12-31-02, award code CA076562.
			Cho, C.W., et al, "Ultrasound induced mild hyperthermia as a novel approach to increase drug intake in brain microvessel endothelial cells", Pharm Res. 2002 Aug;19(8);1123-9
			Internet article: "Good Vibrations Personal Energiser Pty Ltd. - Vitaфон-IR" (Google Web address)

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**FILED IN THE UNITED STATES PATENT & TRADEMARK OFFICE**

DDR/lsw Check #: 17822 \$180.00

Serial No.: 10/034,833

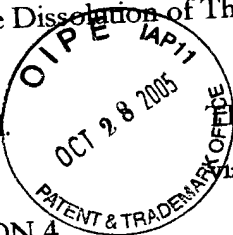
Title: Systems to Promote Dissolution of Thrombi in the Thoracic Cavity

Applicant: Thompson et al.

Mailed: 25 October 2005

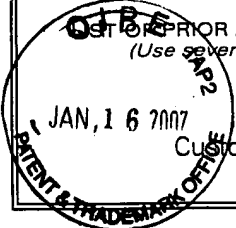
Docket #: 9345.17121-CON 4

Enclosures: Transmittal of Information Disclosure Statement;  
Information Disclosure Statement; copy of reference cited;  
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IMI 3 Systems, Inc.

Via First Class Mail

	PRIOR ART CITED BY APPLICANT <i>(Use several sheets if necessary)</i>		ATTY DOCKET NO. 9345.17121-CON 4	SERIAL NO. 10/034,833
	APPLICANT Thompson et al.			
	FILING DATE 27 December 2001		GROUP 3737	

### U.S. PATENT DOCUMENTS

Examiner Initial	DOCUMENT NUMBER	Date	Name	Class	Subclass	Filing Date (If Appropriate)
	2004/0230252	11/2004	Kullok et al.			

### FOREIGN PATENT DOCUMENTS

		DOCUMENT NUMBER	DATE	COUNTRY	Class	Subclass	Translation Yes No

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**FILED IN THE UNITED STATES PATENT & TRADEMARK OFFICE**

DDR/lsw , Check No. 17694 \$ .0.00

Serial No.: 10/034,833

Title: Systems to Promote Dissolution of Thrombi in the Thoracic Cavity

Applicant: Thompson et al.

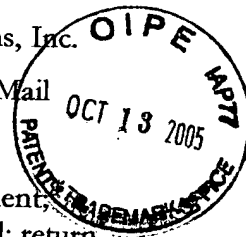
TIMI 3 Systems, Inc.

Mailed: 10 October 2005

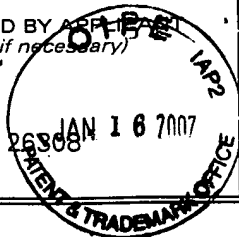
via First Class Mail

Docket #: 9345.17121-CON 4

Enclosures: Transmittal of Information Disclosure Statement;  
Information Disclosure Statement; copy of references cited; return  
postcard; Check No. 17694



LIST OF PRIOR ART CITED BY APPLICANT (Use several sheets if necessary)	ATTY DOCKET NO. 9345,17121-CON 4	SERIAL NO. 10/034,833
	APPLICANT Thompson et al.	
Customer No. 26308	FILING DATE 27 December 2001	GROUP 3737



### U.S. PATENT DOCUMENTS

Examiner Initial	DOCUMENT NUMBER	Date	Name	Class	Subclass	Filing Date (If Appropriate)
	5,454,373	10/1995	Koger et al.			
	5,913,834	06/1999	Francais			
	6,095,979	08/2000	Ohtomo			
	6,434,539	08/2002	Woodsum et al.			
	6,511,429	01/2003	Fatemi et al.			
	2004/0133066	07/2004	Mann et al.			
	2005/0004460	01/2005	Taylor et al.			

### FOREIGN PATENT DOCUMENTS

		DOCUMENT NUMBER	DATE	COUNTRY	Class	Subclass	Translation Yes No

### OTHER PRIOR ART (Including Author, Title, Date, Pertinent Pages, Etc.)


EXAMINER	DATE CONSIDERED
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**FILED IN THE UNITED STATES PATENT & TRADEMARK OFFICE**

PJF/lsw      Check #: 17549      \$800.00

Serial No.: 10/034,833

Title: Systems to Promote Dissolution of Thrombi in the Thoracic Cavity

Applicant: Thompson et al.

TIMI 3 Systems, Inc.

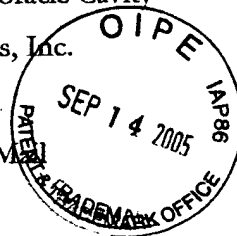
Official Action Date: 11 April 2005

Mailed: 12 September 2005

via First Class Mail

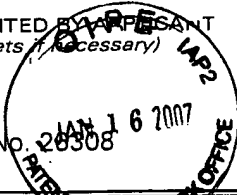
Docket #: 9345.17121-CON 4

Enclosures: Request for Continued Examination (RCE) Transmittal  
Letter; Amendment B; Transmittal of Information Disclosure Statement;  
Information Disclosure Statement; copy of references cited; Check No.  
17549; return postcard



LIST OF PRIOR ART CITED BY APPLICANT (Use several sheets if necessary)	ATTY DOCKET NO. 9345,17121-CON 2	SERIAL NO. 09/882,280
	APPLICANT Thompson et al.	
	FILING DATE 15 June 2001	GROUP 3737

Customer No. 26308



### U.S. PATENT DOCUMENTS

Examiner Initial	DOCUMENT NUMBER	Date	Name	Class	Subclass	Filing Date (if Appropriate)
	5,626,554	05/1997	Ryaby et al.			
	4,651,716	03/1987	Forester et al.			
	5,230,334	07/1993	Klopotek et al.			
	4,955,365	09/1990	Fry et al.			

### FOREIGN PATENT DOCUMENTS

		DOCUMENT NUMBER	DATE	COUNTRY	Class	Subclass	Translation Yes No

### OTHER PRIOR ART (Including Author, Title, Date, Pertinent Pages, Etc.)


EXAMINER	DATE CONSIDERED
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